DOCUMENT RESUME

ED 193 190 SP 016 759

AUTHOR Arnold, Justine; Grogan, Jane, Ed.
TITLE The Emotional Aspects of Nutrition. New Horizons in Nutrition.
INSTITUTION Luzerne Intermediate Unit 18, Kingston, Pa.
SPONS AGENCY Pennsylvania State Dept. of Education, Harrisburg. Bureau of Curriculum Services.
PUB DATE 80
NOTE 14p.: For related documents, see SP 016 752-761.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Behavior Modification; Body Weight; *Dietetics; Eating Habits; Health Education; *Nutrition Instruction; *Obesity; Physical Health; Psychological Needs; *Psychological Patterns; Secondary Education; Self Care Skills; Self Concept; *Stress Variables
IDENTIFIERS *Anorexia Nervosa

ABSTRACT

This instructional handbook is one of a series of ten packets designed to form a comprehensive course in nutrition for secondary students. The focus of this booklet is on the psychological aspects of obesity. A discussion is also presented of the emotional and psychological causes of anorexia nervosa. It contains a page of teaching suggestions, a pre-test for the students, and factual nutrition information with examples of how this information can be used in daily living. A post-test and bibliography are included. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

NEW HORIZONS IN NUTRITION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

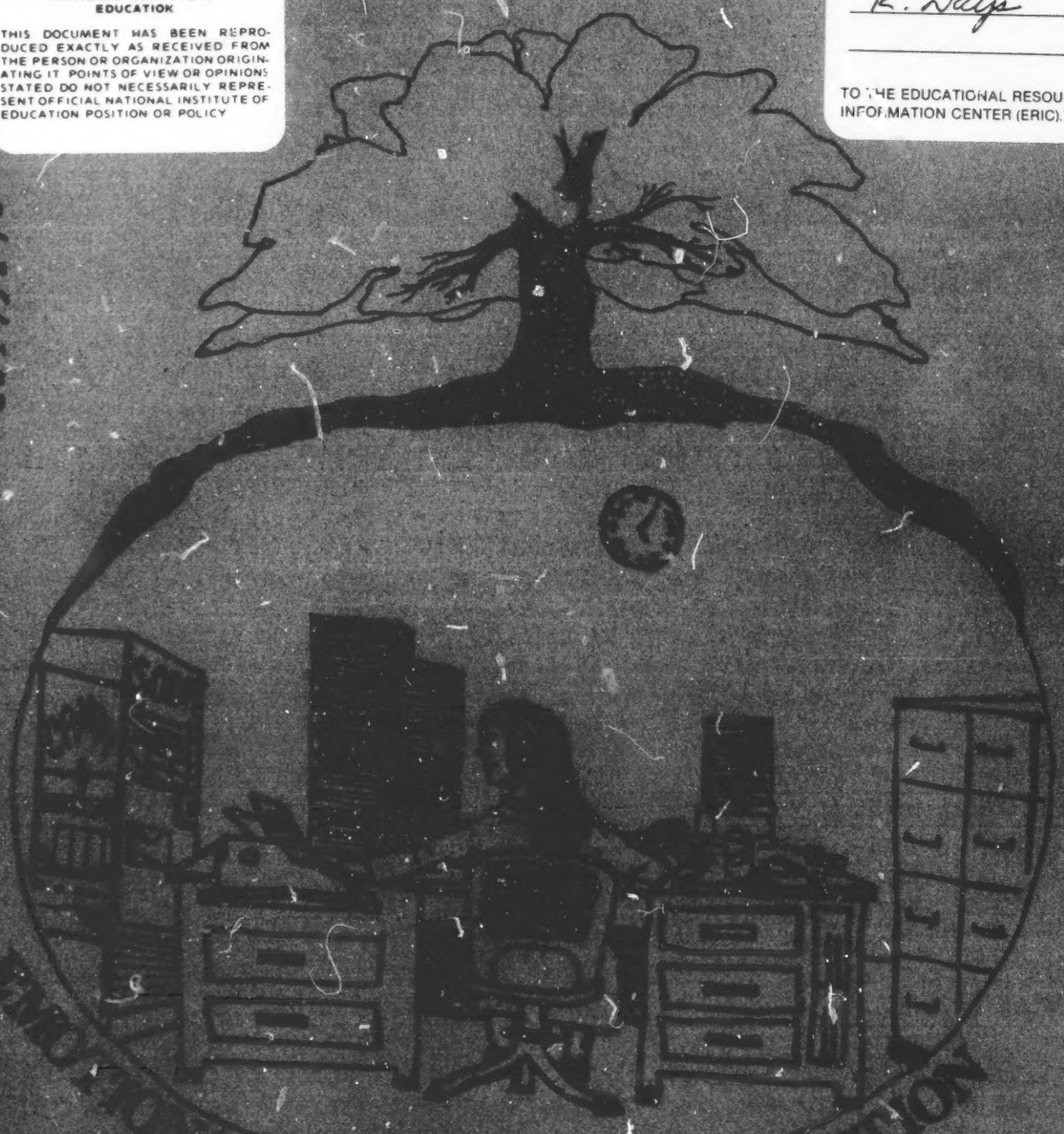
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. Days

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED193190



NEW HORIZONS IN NUTRITION

AN ISSUE ORIENTED APPROACH

BY

Joy Armillay, M.S., R.D., Researcher

Justine Arnold, M.S., R.D., Author

Mary Ann Ashton, M.S., R.D., Field Testing Coordinator

Jane Grogan, M.S., Editor and Project Coordinator

Michael Weida, Illustrator

DEVELOPED THROUGH A NUTRITION EDUCATION AND TRAINING GRANT FROM THE PENNSYLVANIA DEPARTMENT OF EDUCATION TO

LUZERNE INTERMEDIATE UNIT 18
368 Tioga Avenue
Kingston, Pennsylvania 18704

Summer, 1980

ACKNOWLEDGMENTS

The project staff wishes to express their sincere appreciation to the following teachers who assisted with the field testing of these instructional packets.

GREATER NANTICOKE AREA SCHOOL DISTRICT
LOUISE HUDAK
JOHN KASHATUS
THEODORE WIATEROWSKI

HANOVER AREA SCHOOL DISTRICT
MARIE DRUFFNER
ROSEMARY KOCHER
MARY ANN MACIUN
MARY SUE MITKE

HAZLETON AREA SCHOOL DISTRICT
ELIZABETH ABERNATHY
ANNE CONNOR
ROBERT R. WILLIAMS

LAKE LEHMAN SCHOOL DISTRICT
LYNN EVANS
JERI JONES
EMMA MATZ

WILKES-BARRE AREA SCHOOL DISTRICT
FIORA SHRADER

WYOMING VALLEY WEST SCHOOL DISTRICT
ESTELLE FREEDMAN
MIRIAM HANNON
MARGE KELLY
REGINA TIRPAK
DOLORES WEISS

PROGRAM INTRODUCTION

These ten instructional packets are designed to help you make the science of nutrition a fascinating, relevant topic of study for your students. The study of nutrition is the most basic of all skills as eating is something done by every student every day of his or her life. With the intrinsic relationship between proper nutrition and good health, it is vitally important that we help students to make intelligent decisions with regard to what they eat.

The ten packets which make up New Horizons in Nutrition can be taken together to form a comprehensive course in nutrition for secondary students. If you prefer, individual packets can be used when they're relevant to specific topics in health, home economics, science, or social studies classes. In addition, you can use the materials with entire classes or individual students can be given the packets for self-directed study.

Each packet contains a page of teaching suggestions which can easily be detached before the rest of the booklet is given to the students. The materials for the students include a pre-test, a selection which provides the students with factual information and examples of how this information can be utilized in everyday life, and a post test. Reading the selections and completing the evaluation devices is not enough to insure mastery of the concepts. We urge you to reinforce the packets by following through with related classroom activities. You'll find suggestions in the "Notes to the Teacher" or use them as a springboard to develop activities more ideally suited to the needs of your students. Finally, brief bibliographies are provided with each packet which lists related readings and audiovisual materials.

These suggested materials are not meant to be used as a research bibliography. Rather, they are sources of additional information which are likely to be of interest to secondary students.

The topics of the ten packets are:

1. *Advertising*
2. *Back to Basics*
3. *The Emotional Aspects of Nutrition*
4. *Food Faddism*
5. *Low Carbohydrate Diets*
6. *Nutrition and the Athlete*
7. *Nutrition: Yesterday, Today, and Tommorrow*
8. *Social Issues in Nutrition*
9. *Vegetarianism*
10. *Vitamin C and the Common Cold*

We sincerely hope these packets help you to make nutrition education an alive, relevant, and exciting topic of study for you and your students. The benefits for everyone are well worth your effort.

The Authors

TEACHING NOTES

INTRODUCTION

Many persons today encounter increasing stress in their daily lives, and this has important nutritional considerations. This packet also looks at emotional factors which play a role in obesity and anorexia nervosa.

OBJECTIVES

1. Students will recognize the relationship between stress and protein metabolism.

2. Students will identify emotional factors which play a role in obesity and anorexia nervosa.

ACTIVITIES

1. Students can look at some recent studies on stress and the relationship of stress to hypertension, heart disease, migraine headaches, etc. They can present their findings in a panel discussion to the class. Include information on biofeedback.

2. Students can review a sample of the menus available through the School Lunch Programs. Discuss which food selections would be appropriate for someone striving to control their weight and still follow a balanced diet. If there are few or no low calorie options available, perhaps a committee of students can meet with the food service director to discuss possible alternatives.

3. Develop a series of skits in which students role play stressful situations they are likely to encounter. After each skit, allow the class to offer suggestions on how the stress might be reduced.

PRE TEST KEY

1.	T	6.	F
2.	F	7.	F
3.	T	8.	T
4.	F	9.	F
5.	T	10.	F

POST TEST KEY

1.	F	6.	T
2.	F	7.	T
3.	T	8.	F
4.	F	9.	T
5.	T	10.	F

BIBLIOGRAPHY

Bruche, H. EATING DISORDERS: OBESITY ANOREXIA NERVOSA, AND THE PERSON WITHIN N.Y., Karger, 1976.

Arlin, M. The SCIENCE OF NUTRITION Chapter 15. Macmillan , 1977

PRE TEST

1. _____ Anorexia nervosa is a physiological and psychological condition which is on the rise.

2. _____ Carbohydrate is the only nutrient which contains nitrogen.

3. _____ Positive nitrogen balance occurs during periods of growth.

4. _____ Obesity is directly an inherited condition.

5. _____ Persons today tend to be less active than in the past and therefore they require fewer kilocalories.

6. _____ Olympic marathon runners tend to have an endomorphic body build.

7. _____ During stress we are often in a state of positive nitrogen balance.

8. _____ A fat baby is not necessarily a healthy baby.

9. _____ When a person is under stress, they should increase their intake of calories.

10. _____ When on a weight reduction diet, a person should only eat foods from the Meat and Fruit and Vegetable Food Groups.

EMOTIONAL ASPECTS OF NUTRITION

HOW STRESS AFFECTS FOOD HABITS

Stress is an every day occurence with the American style of living. We are constantly faced with tension. There may be conflict within the home over the acceptance of responsibilities, the use of money, curfew, and food choice. The school situation creates more problems. Emotional difficulties may stem from the feeling of social inadequacy or the pressure of schoolwork. Work can introduce new pressures. The concern about money, the promotion, competition, and success are just a few of the problems. Stress is everywhere. It surrounds us and at times engulfs us.

The amount of stress that we face daily has become a concern of many health officials. Newly opened clinics are devoted to measuring stress and its effect on the body. The studies that have been completed prove that some of the effects of stress can be measured. It was found that students, who were taking exams, those faced with pressure from home, etc., and young women who were upset about a pregnancy, were in a state of negative nitrogen balance. This indicates that stress may lead to a disturbance of protein metabolism.

Nitrogen balance studies are used to determine protein utilization within the body. Protein is the only nutrient that contains nitrogen, so a study of this element will indicate if protein is being metabolized correctly or incorrectly. There are three main modes of protein utilization:

1. ***Nitrogen Equilibrium*** *- this is the state in which nitrogen intake is equal to nitrogen excretion. A state of equilibrium is normal for the healthy adult.*

2. ***Positive Nitrogen Balance*** *- this is the state in which nitrogen intake exceeds nitrogen excretion. It indicates that the body is building new tissues. Positive balance is found in growing children, in pregnancy, following an illness or injury, and in athletic training when muscles are being developed.*

3. ***Negative Nitrogen Balance*** *- this is the state in which nitrogen excretion exceeds nitrogen intake. This is undesirable because it indicates that an individual is losing nitrogen from the tissues more rapidly than it is being replaced. Negative balance is found during an injury, a burn, an illness, immobilization, stress, or it may be produced by an inadequate kilocalorie intake, or a diet that is low in high quality protein (milk, meat, eggs, cheese, poultry).*

The studies, that have been undertaken to determine the effect of stress, show that protein utilization can be affected by our emotional state. When the body is under stress and the emotional climate is disturbed, nitrogen excretion may be accelerated. The body loses nitrogen rapidly and a state of negative balance exists. This means that the body is losing substance in the form of tissue. Tissue

breakdown exceeds tissue building. This will result in a weight loss. To prevent this situation from occurring, individuals in stress situations should increase their protein intake. Complete or high quality protein (refer to packet on vegetarianism) should be emphasized at this time.

Stress can also affect the amount of food we consume. Some people eat their way through stress and others stop eating. Those individuals, who do not eat, would definitely go into a state of negative balance because of the insufficient number of kilocalories, and the decreased amount of high quality protein. Some individuals, who eat large quantities at this time, may not completely utilize the nutrients. This could produce negative balance. Others may eat large quantities of food and gain weight. One way or another, we pay for stress.

OBESITY

The exact cause of obesity is not known. Many people from all age groups exceed their ideal body weight. This is a particular concern to Americans and to those of us who live in Pennsylvania. This is the number one health problem in the United States and there is a high rate of obesity in Pennsylvania. Certain counties within the Commonwealth are a real concern to health officials. Why obesity is so prevalent is not exactly clear, but there are many predisposing factors.

Eating too much becomes a habit for many people. This may be the result of a lack of the correct knowledge of nutrition. The amounts do not have to be conspicuously excessive, the extra pat of butter, the second roll, the TV snack may be enough to tip the scales. Eating is also tied in with social relationships. Too many parties or social events may add the extra weight.

Some people fail to adjust their food intake to reduced energy needs. We ride rather than walk; we sit and watch TV for exercise; and we use labor saving devices at home, at school, and at work. This means our energy requirement is decreased, and many people fail to make the adjustment. The result is extra pounds.

Eating may provide comfort to a bored individual, to one who feels lonely or unloved, to the person who is dissatisfied with his family, social, or financial standing, or someone who needs an excuse to avoid the realities of life. Eating becomes an outlet for these problems.

Research has proven that there is a high correlation between obesity in parents and their children. Dr. Jean Mayer presents the following statistics:

1. If both parents are of normal weight, only 7% of the children will be obese;

2. If one parent is obese, the incidence in children is 40%; and

3. If both parents are obese, there is an 80% chance that the children will be obese.

Dr. Mayer also found a correlation between obesity and body build. Our body build is inherited from our parents, and there are three types:

1. Endomorphic - this is the round, soft individual who gains weight easily;

2. Ectomorphic - this is the slender, wiry person who rarely becomes overweight; and

3. Mesomorphic - this is mid-way between the two and usually refers to a well proportioned individual.

Persons with some body builds are predisposed to gain weight. The person with an endomorphic build will have to exercise control and vigilance as a means of preventing obesity.

An effort should be made to prevent obesity. It is much easier to prevent it than to control it once it is present. People who are most susceptible to an excessive weight gain are children of obese parents and children who have stocky frames. The pattern for obesity is often set in infancy when the mother overfeeds the baby, believing that "the fat baby is a healthy baby". Overeating may become a habit with children following an illness. During adolescent years food is often used to submerge the many problems that the boy and girl face.

These trends should be recognized and an effort should be made to retrain or redirect food habits. An emphasis should be placed on the Basic Four Food Groups. A pattern of activity should be taught during childhood, and stressed during the school years. Physical education should be directed to those activities that are likely to carry over into adult life, such as tennis, golf, swimming, horseback riding, etc. Too often competitive sports exclude the child who most needs the exercise.

Treatment of obesity requires a multi-faceted approach: a diet that is planned for an individual that meets the nutritional needs of that person and is compatible with his/her life-style; adequate dietary counseling by a dietician or a nutritionist - this would explain the person's nutritional needs and the principles of a reduction diet; a planned regime of activity - activity helps weight loss, but it should be something that the person can do every day, not just on weekends; and psychological support - the individual should receive support and encouragement from his/her family, friends, and co-workers.

Successful weight loss should be guided by a physician with the help of a dietitian and/or

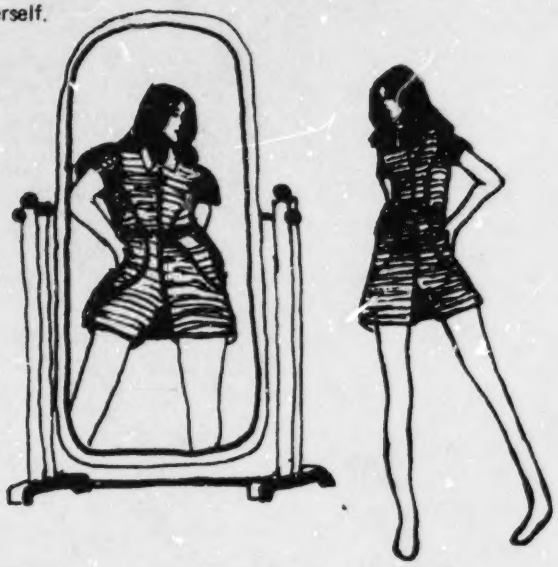
nutritionist. The reduction diet must be planned for the individual, and must adequately provide for the growth needs of children and the adolescent. The Basic Four Food Groups should be emphasized. Fad diets should be avoided for several reasons: they are dull, monotonous, and boring; they frequently eliminate a needed nutrient; they are not planned for the individual and do not allow for special needs such as growth; and they do not retrain or redirect eating habits. Weight that is lost quickly is the weight that returns. A true weight loss is a gradual weight loss. That way the body can adjust to the change. If food has psychological meaning or if the person has deep emotional problems, then the help of a psychiatrist should be sought before weight loss is attempted.

ANOREXIA NERVOSA

Anorexia Nervosa is a disturbance that is increasing at an alarming rate today. It is a physiological disorder which derives from psychological problems. It occurs primarily in females with the onset usually occuring in early adolescence. One researcher described the condition as "weight loss gone haywire". The typical individual is a teen-age girl with a history of being "chubby" as a youngster. The girl has probably been teased or ridiculed about her weight by family, friends, or teachers. Parents usually report that in the past the person was cooperative and easy to get along with. An overriding desire to lose weight leads to self-imposed starvation, bizarre food habits, self-induced vomiting, hyperactivity, and laxative abuse as a means of preventing weight gain.

The individual usually is able to carry on normal school and social activities, while denying hunger and fatigue. Anorexia Nervosa is characterized by extreme weight loss, even to the point of emaciation, as a consequence of a refusal to eat. The term anorexia is not truly descriptive of the problem. The girl does not lose her appetite. Rather she does not permit herself to eat. By the time medical help is sought, personality changes have taken place. She may become greedy, envious, narcissistic (self-love or self-admiration), and with a desire to control the family. Frequently, the major emotional problem is a poor mother-daughter relationship. Many of these girls are expert calorie counters and frequently place themselves on 600 to 900 kilocalorie diets. One researcher reported the following case: one 16-year-old high school girl whose ideal weight was 104 pounds consistently consumed 900 kilocalories per day. She weighed 76 pounds when she was finally seen by the physician. Another frequent indication of Anorexia Nervosa is that the victim has a distorted body image. For example no matter how thin or

emaciated the girl becomes, she will still thing of herself as being "too fat". Logic and reason do nothing to chang her opinion of herself.



Treatment must be aimed at the family and the individual. Psychotherapy is needed to resolve the basic conflict. For some individuals, short-term intervention is needed to prevent death by starvation. Different means have been used to induce the person to eat. One approach uses behavior modification. With this treatment, privileges are accorded the individual on achievement of a predetermined weight gain each day. Failure to gain the expected amount of weight results in the suspension of privileges, and may force the use of supplemental feedings until the desired weight is reached. The clinical signs and symptoms are reversible with weight gain.

SUMMARY

Americans tend to overeat, and the reasons for doing so are numerous. Obesity remains our number one health problem today. Most people do not realize that obesity is a form of malnutrition. Overweight results from eating the wrong foods, too often, and in large quantities. The best way to prevent obesity is to emphasize the Basic Four Food Groups throughout the life cycle - from infancy to our elderly years. Perhaps if we stress the Basic Food Groups, obesity can be prevented, and teen-age girls will be spared the embarassment of uncontrolled weight, which might lead to Anorexia Nervosa.

QUESTIONS FOR THOUGHT

It is important to find a practical application for the information which you have just received about how emotions affect our food habits. Therefore think about at least two situations which result in stress in your life. For each situation, respond to the following questions.

1. When you find yourself in a stressful situation, do you notice any physical reaction (i.e. sweaty hands, "nervous" stomach, headache, etc.)?
2. Do your eating habits change when you're under stress? How?
3. What do you think you might do to change the particular situation so it's less stressful?
4. If you find yourself in a stressful situation that you are unable to change, what activities can you participate in to try to distract yourself or to relax?

POST TEST

1. _____ Persons with anorexia nervosa usually outgrow the condition without treatment.

2. _____ A healthy adult is usually in a state of positive nitrogen balance.

3. _____ In the long run, sports such as tennis, swimming, and golf are usually preferable to competitive, contact sports.

4. _____ Ectomorphic individuals tend to gain weight easily.

5. _____ A person who has been seriously injured is in a state of negative nitrogen balance.

6. _____ Behavior modification refers to using a system of rewards to obtain the desired changes in a person's behavior.

7. _____ Stress seems to be on the rise in daily life.

8. _____ If a person is less than 30 pounds overweight, it is usually safe for them to design their own weight loss diet.

9. _____ It is possible to be overweight and still be malnourished.

10. _____ Anorexia nervosa is most likely to occur in teenagers with a history of behavior problems.